

CLAIMS

5 1. A user recognition system for automatic managing of accesses, the use of equipment, handling of goods or enjoying of services, including at least one central processor (2, 15), at least one peripheral unit (4, 11) with at least one detecting device (12) for detecting biometric data relating to the physical characteristic features identifying a user, characterised in that each peripheral unit (4, 11) is connected through at least one interface unit (5, 17) to said central processor (2, 15) by means of a communication network, and that each peripheral unit (4, 11) is
10 10 have at least one electronic card (14) suitable for permitting two-way transmission of biometric data acquired from said detection means (12) to said central processor (2, 15), through at least one interface unit (5,17) acting as a network card and interface between a port (19) of said central processor (2, 15) and said communication network.

15 2. A system according to claim 1, characterised in that the said electronic card (14) comprises at least one portion thereof including Ethernet wiring and at least another portion thereof including a serial wiring.

20 3. A system according to claim 2, characterized in that a transmission protocol used in said serial wiring portion is a high-speed synchronous serial transmission protocol.

25 4. A system according to any previous claim, characterized in that the said electronic card (14) comprises at least one communication chip (18) and is suitable for transmitting said data to said at least one central processor (2, 15) through said interface unit (5, 17) at a speed of about 1Mbps or greater.

30 5. A system according to claim 4, characterised in that the said communication chip (18) is of RS485 type.

6. 6. A system according to claim 4, characterized in that the said communication chip (18) is of Ethernet type.

7. 7. A system according to claim 5 or 6, characterised in that the said communication chip (18) is designed to create the communication, at a speed of about at least 1 Mbps, between a port (19) on said central processor (2, 15) and at

least one of said electronic cards (14) associated with a respective peripheral unit (4, 11).

8. A system according to claim 7, characterised in that the said port (19) is a USB port.

5 9. A system according to claim 7, characterised in that the said port (19) is a parallel port.

10 10. A system according to claim 7, characterised in that the said port (19) is an ethernet port.

11. A system according to claim 7, characterised in that the said port (19) is a cunbus port.

10 12. A system according to claim1, characterised in that the connection between each peripheral unit (4, 11) and said interface unit (5, 17) occurs through radio connection.

15 13. A system according to claim 12, characterised in that it comprises at least one connection hub (22) suitable for connecting at least two of said interface units (5, 17) to said central processor (2, 15).

14. A system according to claim 13, characterised in that it comprises a plurality of blocks (21) each having a plurality of peripheral units (4, 11) and connected to said central processor (2, 15) through a respective interface unit (5, 17).

20 15. A system according to claim 1, characterised in that the said electronic card (14) is designed to register at least temporarily said data acquired by said detecting means (12) and to affect on them a compression to obtain a higher transmission speed.

25 16. A system according to any preceding claim, characterised in that a plurality of said peripheral units (4, 11) are connected to one another in cascade and connected to at least one of said interface units (5, 17).

30 17. A system according to any preceding claim, characterised in that each of said peripheral units (4, 11) is suitable for sending through said local central processor (2, 15), a piece of the biometric data detected in tcp/ip network to a remote processor and for establishing a two-way data communication therewith.

2000-08-07/001

18. A system according to claim 1 or 9, characterised in that said electronic card (14) is arranged to be connected to an alphanumeric or graphic display (23) and a respective keyboard (24).
19. A system according to any preceding claim, characterised in that at least one of said interface units (5, 17) can be integrated in a mother board of the central processor (2, 15).
20. A system according to any preceding claim, characterised in that said physical characteristic feature of the user is his finger prints and the said detecting means (12) is a finger print recognizer.
21. A system according to any preceding claim 1 to 18, characterised in that said physical characteristic feature of the user is his eye retina and said detecting means (12) is retina recognizer.
22. A system according to any preceding claim 1 to 18, characterised in that said physical characteristic feature of the user is his voice print and said detecting means (12) is a voice recognizer.
23. A system according to any preceding claim 1 to 18, characterised in that said physical characteristic feature of the user are his facial features and said detecting means (12) is a voice recognizer.
24. A system according to any preceding 1 to 18 claims, characterised in that said data acquired by at least one of said peripheral units (4, 11) are stored in compact and encoded form by said central processor (2, 15).
25. A system according to claim 24, characterised in that between the said central processor (2, 15) and said at least one peripheral unit (4, 11) there is provided at least one level of local processors arranged to make up failures in the network connection between the said central processor (2, 15) and said at least one peripheral unit (4, 11).
26. A system according to claim 24, characterized in that the said Ethernet network uses the tcp/ip protocol.
27. A system according to any preceding claim 1 to 25, characterised in that the said communication network is a digital telecommunication network.